Indian Journal of Information Sources and Services
ISSN: 2231-6094 (P), Vol.13, No.1, 2023, pp.26-31

DOI: https://doi.org/10.51983/ijiss-2023.13.1.3486

A Bibliometric Analysis of Journal of Scientometric Research Based on Dimensions Database

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(Received 14 February 2023; Accepted 7 March 2023; Available online 22 March 2023)

Abstract - **This paper looks at the impact of recent research progress from 2012 to 2022 and is published in the Journal of Scientometric Research. The Journal of Scientometric Research journal underwent a Bibliometric analysis that turned up 370 articles from the Dimensions AI database between the years of 2012 and 2022. This article has examined a number of variables, including the publication format of the document; the distribution of papers and citations by year; the productivity of the writers, and the most cited work. The results demonstrate that the largest number of papers published in 2020 was 58. The year 2022 saw a maximum of 226 citations. Apparently, this shows that Bidyarthi Dutta and Sujit Bhattacharya have overwhelmed the most useful authors list by contributing 15 and 8 articles.**
Keywords: **Bibliometric Analysis, Dimensions Database, Journal of Scientometric Research**

I. INTRODUCTION

Bibliometrics is the utilization of statistical strategies to study books, articles and different distributions. Bibliometric techniques are every now and again utilized in the field of library and information science. Bibliometrics is firmly connected with Scientometric; that is, the examination of scientific measurements and indicators. Alan Pritchard (1969), who initially utilized "bibliometrics," depicted it as the "application of mathematics and statistical methods to books and other media of communication".

Dimensions is a research grant database that connects grants to publications, clinical trials, and patents. Dimensions is a subsidiary of Digital Science, (or Digital Science & Research Solutions Ltd), a technology firm headquartered in London, England. The company makes strategic investments in startups that help with the research lifecycle. Dimensions.ai has over 1.6 billion citations and covers nearly 130 million publications.

II. SOURCE JOURNAL

Journal of Scientometric Research is currently one of the most active journals in the Scientometric sector. Journal of Scientometric Research (J. Scientometric Res.) is the official publication of Phcog.Net. It publishes peer-reviewed processes. Encouraging empirical and theoretical contributions to advance Scientometric research (in its broadest interpretation), the journal considers science and technology studies (STS), Sociological, economic, and Scientometric data to be "use of objects". It is also intended for scholars in other related fields to use as investigating or applying Scientometric analysis to innovation and STS research. The journal publishes articles in all areas of Scientometric, including patent studies (techometrics) and online studies (webometrics). It also publishes papers that apply science-technology-innovation indicators to focus attention on national/regional/sectoral research, innovation and entrepreneurship ecosystem.

III. REVIEW OF LITERATURE

Velmurugan and Radhakrishnan (2016) discussed the Scientometric study in Malaysian Journal of Library and Information Science. The purpose of this study is to look into the scientific publication research productivity in Malaysian Journal of Library and Information Science between 2008 and 2014. The study's findings revealed that the year 2011 had the highest number of author productivity of this research, 74 (2.64%). The highest number of articles published in 2011 were 19.71%, while the lowest number of research articles published in 2014 were 9.86%. The study looked at the rank-wise distributions of contributions, with Malaysia accounting for 31.84% of the total (31.84%), followed by 11.31% were contributed by Iran is the second rank and 11.01% of contributions came from India is the third position, and 7.15% of contributions came from China.

Abdi *et al.,* (2018) analyzed IP&M Journal (1980–2015). The current study was carried out with the goal of providing a summary of research activity in the current journal and characterizing its most significant viewpoints. The analysis focuses on the distribution of articles by year, classification of papers by category, authorship patterns of papers, degree of collaboration, most prolific contributions of papers, distribution of contributions by institutions, geographical distribution of papers, and citation analysis of the IP&M journal. The analysis revealed that 2,913 papers were published in the journal IP&M between 1980 and 2015. Among the published document types, articles had the highest percentage (67.15%). In this study, study identified the top ten prolific authors, top ten institutions, and top 24 prolific countries in terms of paper production. Researchers from the United States have made the greatest percentage of

contributions (50.88%). Study also discovered that the degree of collaboration has increased threefold between 1980-1985 and 2010-2015.

Hakkaraki (2022) discussed the bibliometric study in Asian journal of Information Science and Technology for the year 2011-2021. The analysis revealed that 316 articles appeared in AJIST between 2011 and 2021. There was a maximum of 84 (26.58%) articles published in 2019 and a minimum of 13 (4.11%) articles published in 2015. Of the total 316 contributions, only 62 (19.620%) were made by single authors, while the largest contribution by two authors was 199 (62.974%).

Hakkaraki (2022) examined the Bibliometric Analysis of KELPRO Bulletin is a biannual peer- reviewed academic journal, 2011–2021. The analysis focuses on the distribution of publications output by year, issue, authorship pattern, geographical distribution of authors, and page lengths of articles in the Kelpro bulletin journal. The analysis found that 221 papers were published in the KELPRO Bulletin between 2011 and 2021. The maximum was 25 (11.31%) articles published in 2017 and the minimum 17 (7.69%) articles were published in 2011, 2012 and 2014. Out of the total number of 221 contributions, only 73 (33.03%) were contributed by single authors, while the highest contribution by two authors, was 129 (58.37%) contributions.

IV. OBJECTIVES OF THE STUDY

The key objectives of the study are

1. To identify the document type of publication
2. To know the year-wise distribution articles and citations pattern of the journal of Scientometric research
3. To identify the authorship pattern
4. To identify the country wise distribution of contributors
5. To examine the top 10 prolific authors.
6. To know the Most active institutions.
7. To identify the most cited 15 papers in journal of Scientometric research.

V. RESEARCH METHODOLOGY

Data for this study was recovered from Dimensions AI database developed by Digital Science in collaboration with over 100 leading research organizations around the world. Data retrieved between October 20, 2022, and October 25, 2022. Search was per-formed by utilizing source title such as “Journal of Scientometric Research” search feature of the database. This yielded a complete 370 records. Bibliometric analysis of the Journal of Scientometric Research found 370 articles between 2012 and 2022 over the period under review. The report is also tabulated for detailed analysis. This study involved an analysis of the data collected and presented the results. This study examines various aspects such as citation, the type of document, author models, and the country distribution of contributors, etc.

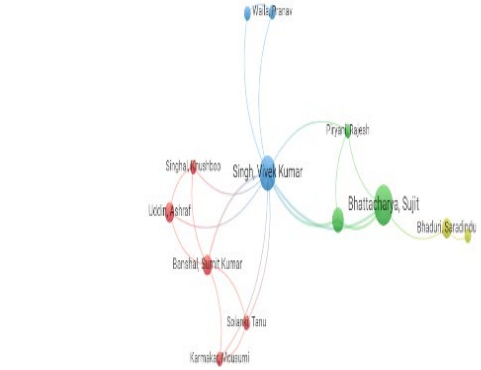

Fig. 1 Co-Authorships visualization network map

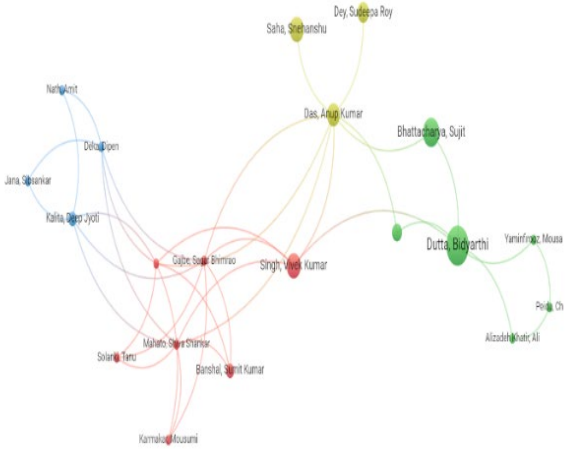

Fig. 2 Citations analysis visualization network map

VI. DATA ANALYSIS

Table I shows the distribution of papers by document that were published in the Journal of Scientometric Research. There are around 16 different types of papers in the study as a whole. The study looked at 370 records. The number of research articles published at their highest was 238 (41.40), and book reviews came in second with 53. (27.80).

Editorial and Perspective Paper of 10 (0.15) respectively, Editor’s Note, Invited Article, Meeting/Conference Report, and Webliography paper of 1 individually, are the smallest publications (Table I).

TABLE I TYPE OF DOCUMENTS

Sl. No.	Types of Documents	No. of Documents	Percentage	Rank
1	Research Articles	238	69.72	1
2	Book Review	53	14.32	2
3	Research Note	22	5.94	3
4	Editorial	10	2.70	4
5	Perspective Paper	10	2.70	4
6	Research in Progress	8	2.16	5
7	Commentary	6	1.62	6
8	IndiaLics Issue	6	1.62	6
9	Review Article	5	1.35	7
10	Machine Learning	4	1.08	8
11	Journal Insight	2	0.54	9
12	Scientific Correspondence	2	0.54	9
13	Editor's Note	1	0.27	10
14	Invited Article	1	0.27	10
15	Meeting/Conference Report	1	0.27	10
16	Webliography	1	0.27	10
	Total	370	100.00%	

Table II displays the distribution of all articles published in the Journal of Scientometric Research. Here it is shown that between 2012 and 2022 a total of 370 articles were found in the Dimensions AI Database. The most articles, 58, were published in 2020. The fewest number of articles 13, were published in the year 2012. In total, 226 citations were found in 2022. As a whole, there were 1 fewer citation in 2012 (Table II).

TABLE II YEAR-WISE DISTRIBUTION OF PUBLICATION AND CITATION

Year	Total No. of articles	Percentage (%)	Citation	Percentage (%)
2012	13	3.56	1	0.11
2013	32	8.64	20	2.28
2014	18	4.86	32	3.55
2015	24	6.48	35	3.89
2016	27	7.29	49	5.45
2017	27	7.29	52	5.78
2018	38	10.27	63	7.00
2019	41	11.08	72	8.00
2020	58	15.67	125	13.90
2021	44	11.89	224	24.91
2022	48	12.97	226	25.13
	370	100%	899	100%

Table III shows that 418 authors made contributions to the source journal. Seven categories were created for authors (i.e., single author, double author, three authors, and four authors; five authors; six authors, more than six authors). The journal has more articles written by a single author (141), followed by those written by a two-author (94); three authors (81), and four authors contributed 36 publications, according to the table (Table III).

TABLE III AUTHORSHIP PATTERN PUBLICATIONS

Authorship Pattern	Total No of Contributions	Percentage (%)	Cumulative contributions	Cumulative % contributions
Single author	141	33.74	141	33.74
Double authors	94	22.48	235	56.22
Three authors	81	19.38	316	75.6
Four authors	36	8.61	352	84.21
Five authors	11	2.64	363	86.85
Six authors	2	0.48	365	87.33
More than six authors	53	12.67	418	100

Authors from different countries contributed to the Journal of Scientometric Research during the research period, as shown in Table IV in the geographical distribution of contributors of articles (Table IV). With 416 contributors, India emerged as the top contributor, followed by Iran with 73 contributors. Following that, Brazil, China, United States and Netherlands 36, 25, 20 and 19 contributed individually. Saudi Arabia and Turkey each contributed 18.

TABLE IV GEOGRAPHICAL DISTRIBUTION OF CONTRIBUTORS OF ARTICLES

Country	No. of Contributions	Percentage (%)	Cumulative No. of Contributors	Cumulative Percentage of Contributors
India	416	49.76	416	49.76
Iran	73	8.74	489	58.5
Brazil	36	4.30	525	62.8
China	25	2.99	550	65.79
United States	20	2.39	570	68.18
Netherlands	19	2.28	589	70.46
Saudi Arabia	18	2.16	607	72.62
Turkey	18	2.16	625	74.78
United Kingdom	15	1.79	640	76.57
Malaysia	14	1.68	654	78.25
Mexico	12	1.43	666	79.68
Vietnam	10	1.19	676	80.87
Other countries	160	19.13	836	100

TABLE V MOST TEN ACTIVE AUTHORS

Sl. No.	Name of Authors	No. of Document	Percentage (%)	Rank
1	Bidyarthi Dutta.	15	23.12%	1
2	Sujit Bhattacharya.	8	3.52%	2
3	Vivek Kumar Singh.	6	3.52%	3
4	SnehanshuSaha.	6	1.51%	3
5	Pranav N Desai.	5	1.51%	4
6	Ronald Neil Kostoff.	5	1.01%	4
7	Anup Kumar Das.	5	1.01%	4
8	Grant Lewison.	5	1.01%	4
9	Basavaraj Shivappa Kademani.	4	1.01%	5
10	Karanam Bhanumurthy.	4	1.01%	5

TABLE VI MOST ACTIVE INSTITUTIONS

Sl. No.	Institution	No. of Document	Rank
1	Dalian University of Technology, China	8	1
2	Jawaharlal Nehru University, India	7	2
3	Imam Abdulrahman Bin Faisal university, Saudi Arabia	6	3
4	Isfahan University of Medical Science, Iran	6	3
5	South Asian University, India	6	3
6	Symbiosis International University, India	6	3
7	Utrecht University, Netherlands	6	3
8	Preuniversity, India	5	4
9	Babes-Bolyai University, Romania	4	5
10	Bhabha Atomic Research Centre. India	4	5
11	Fluminense Federal University, Brazil	4	5
12	King Fahd University of Petroleum and Minerals, Saudi Arabia	4	5
13	Padjadjaran University, Indonesia	4	5
14	Payame Noor University, Iran	4	5
15	Universidade de São Paulo, Brazil	4	5
16	University of Calcutta, India	4	5
17	University of Delhi, India	4	5

Table V lists the top ten productive researchers. Even though there are equivalent numbers of other authors, it appears that the top 3 researchers have a clear advantage in publications. The most successful scientists were from India Bidyarthi Dutta, who contributed 15 papers, and Sujit Bhattacharya 8 papers were ranked first and second among the most productive authors (Table V). (Figure 7). And then this followed by Vivek Kumar Singh and Snehanshu Saha, who had contributed 6 papers ranked third, Pranav N Desai, Ronald Neil Kostoff., Anup Kumar Das and Grant Lewison, who contributed 5 papers ranked fourth and followed by B Basavaraj Shivappa Kademani and Karanam Bhanumurthy, who had each contributed 4 papers and was placed fifth.

During the study period, the distribution of papers published in the Journal of Scientometric Research by institution. According to Table VI, Dalian University of Technology, China has the most publishing institutions (8 articles), followed by Jawaharlal Nehru University, India (7 articles), Imam Abdulrahman Bin Faisal university, Saudi Arabia, Isfahan University of Medical Science, Iran, South Asian University, India, Symbiosis International University, India and Utrecht University, Netherlands, individually (6 articles), followed by PES University, India (5 articles).

The top 15 articles cited in the Journal of Scientometric Research are shown in Table VII. The most cited article in the Journal of Scientometric Research is Bibliometric Analysis Using Bibliometrix a R Package, which was published in (2020) and has been cited over 79 times, followed by Edited Volumes, Monographs, and Books chapters in the Book Citation Index (BKCI) and Science Citation Index (Sci, Sosci, A&HCi), which was published in 2012 and has received 42 citations.

TABLE VII THE 15 MOST CITED DOCUMENTS IN THE JOURNAL OF SCIENTOMETRIC RESEARCH

Rank	Title	Name of the Authors	Year	Total Citations
1	Bibliometric Analysis Using Bibliometrix an R Package	Hamid Dervis	2020	79
2	Edited Volumes, Monographs and Books chapters in the Book citation Index (BKCI) and Science Citation Index (Sci, Sosci, A&HCi)	LoetLeydesdorff, Ulrike Felt	2012	42
3	Brazilian Growth in the Mainstream Science: The Role of Human Resources and National Journals	Jacqueline Leta	2012	35
4	Genesis of altimetric or article-level metrics for measuring efficacy of scholarly communications: Current Perspective	Anup Kumar Das, Sanjaya Mishra	2014	23
5	The growth of Brazilian Metrics literature	RubnUrbizagstegui Alvarado, Cristina Restrepo Arango	2015	22
6	Triple Helix of University-industry-government relationship in west Africa	Eustache Megnigbeto	2013	19
7	Editorial	Sujit Bhattacharya	2012	17
8	Measles: A Quantitative Analysis of World Publication during 2001-2010	Adarsh Bala, B.M. Gupta	2012	16
9	Web of Science Research Funding Information: Methodology for its use in Analysis and Evaluation	MurshedaBegum, Grant Lewison	2017	16
10	Basic Independence Axioms for the publication-Citation System	Ronald Rousseau, Fred Y Ye	2012	16
11	Publication Productivity Pattern of Malaysian Researchers in Scopus from 1995 to 2015	Arvati Bakri, Nurul Mardhiah Azura, MD Nadzar, Roliana Ibrahim, Muzammil Tahira	2017	15
12	Editorial	Sujit Bhattacharya	2013	14
13	A Scientometric Analysis of Research in Recommender Systems	Pranav Wail, Vivek Kumar Singh, Manoj Kumar Singh	2016	14
14	Some Salient Aspects of Machine Learning Research: A Bibliometric Analysis	Sujit Bhattacharya	2019	12
15	Why and where Wikipedia is cited in Journal Articles	FaribaTohidinasab, Hamid R Jamali	2013	10

VI FINDINGS OF STUDY

1. The followings are several useful facts discovered from the analysis of the Journal of Scientometric Research. The analysis displays a trend of growth in contributions published during 2012 to 2022.
2. Most of the contributions are on Research articles (238), followed by book review (53), Research Note with (22), Editorial (10) and Perspective Paper (10).
3. In 2020, the most articles, 58, were published. In the year 2012, the lowest number of articles published was 13. In 2022, the most citations (226) were discovered. The year with the fewest citations were 2012.
4. It shows that during the study period from 2012 to 2022. The most authors contributed papers by single Authors.
5. Most of the contributions in Journal of Scientometric Research are from India 416 (50.8%) followed by Iran

73 (7.11%); Brazil 36 (6.28%); China 25 (3.78%) and USA 20 (3.36%).

6. Among the most productive authors, most successful scientists are from India Bidyarthi Dutta, who contributed 15 papers, and Sujit Bhattacharya, 8 papers were ranked first and second, respectively.
7. The results of institution wise of articles displayed that the most contribution were from Dalian University of Technology, China 8 (4.05%) followed by Jawaharlal Nehru University, India 7 (2.88%), Imam Abdulrahman Bin Faisal university, Saudi Arabia 6 (2.71%), Isfahan University of Medical Science, Iran 6 (2.54%), South Asian University, India 6 (2.54%) etc. respectively.
8. The most cited article in the Journal of Scientometric Research is Bibliometric Analysis Using Bibliometrix, an R Package, which was published in (2020) and has been cited over 79 times.

VII. CONCLUSION

The Journal of Scientometric Research is one of the most prolific journals in the field of Scientometric. A Bibliometric analysis of the Journal of Scientometric Research journal yielded 370 articles from the Dimensions AI database between 2012 and 2022. The paper observed 370 records during the study period. The most publications were in the form of research articles, with 238 and Editor's Note, Invited Article, Meeting/Conference Report, and Webliography paper of 1individually, are the smallest publications.

According to the findings, the maximum articles, i.e., 58, were published in 2020. The maximum number of citations 226 found in 2022. The journal appears to have more articles written by single authors (141). It was discovered that India had contributed 416 articles and was ranked first in the country list. It shows that Bidyarthi Dutta and Sujit Bhattacharya dominated the productive author list with 15 and 8 articles, individually. The results of the articles by institution revealed that the most contributions came from Dalian University of Technology in China (8). With 79 citations, the most cited work is Bibliometric Analysis Using Bibliometrix a R Package, published in 2020. Finally, it was discovered that India had contributed 416 articles and was ranked first in the country list.

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